

**REPORT**  
**OF THE**  
**BOTANICAL AND FORESTRY**  
**DEPARTMENT**  
**FOR THE YEAR**  
**1923**



HONGKONG 1924  
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## HONGKONG

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### REPORT ON THE BOTANICAL AND FORESTRY DEPARTMENT FOR THE YEAR 1923.

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#### GENERAL REMARKS.

The first quarter of the year was exceptionally dry but not unfavourable generally for gardening operations; the second quarter was comparatively wet and unfavourable for garden work but forestry operations were thereby facilitated. During the third quarter copious rain fell especially during and after typhoons, and the fourth quarter was also exceedingly wet, the total rainfall for the year being 109.01 inches. Particulars of the rainfall at the Botanic Gardens are given in Table I.

Typhoon signals were hoisted ten times during the year. Plants and trees in many places suffered considerably from the minor storms experienced and in the typhoon of the 18th August incalculable damage was done to trees and shrubs in the Gardens, many of which were of great economic or scientific interest, to roadside trees and to the plantations generally. Many years must elapse before the effects of the storm can be effaced.

#### GARDENS, PARKS AND GROUNDS.

*The Botanic Gardens:*—The most regrettable losses experienced by the Gardens from the typhoons of July and August were as follows:—an *Aleurites triloba*, which was an outstanding feature at the north-east entrance to the Old Botanic Garden from Upper Albert Road, was blown down in July and killed; the only full grown specimen of *Cinnamomum Burmanni* near the Statue, which lost one of its principal limbs in a typhoon last year, was now totally destroyed; a *Paulownia Fortunei* which flowered magnificently with its neighbours near the plant houses in the Old Garden was uprooted and killed; and several fine ornamental trees, a *Lysidice rhodostegia* inside the Garden Road wall and a *Heteropanax fragrans* near the fountain were destroyed. In the avenue above the fountain there were formerly eleven large Australian trees, *Grevillea robusta*, several of which were completely killed and others so badly damaged that they had to be cut down. Some years ago in anticipation of the loss of these trees, the late Mr. Tutchet had planted a row of *Cassia fistula* in close proximity and these will now flourish in their place. Losses in the New Garden consisted of an *Artocarpus integrifolia*, an *Erythrina suberosa* an *Elaeocarpus* sp., a native tree of *Viburnum odoratissimum* and a specimen *Pandanus furcans*. Many other trees were much disfigured.



Creeper fences and plant houses in both gardens required considerable repairs after the storms. Pot plants which were carried into shelter on the approach of each storm suffered little from the high winds but constant handling robbed them of many of their blooms.

The very heavy rains which fell on the last days in August and October also wrought considerable damage. In the New Garden the Upper Gallery Walk at the west end and the bank above were undermined and a large landslide took place on September 1st, involving the whole earth bank between Robinson Road and Glenealy Path. The slide took place some forty minutes after the great earthquake in Japan and there may possibly have been some connection between the two events. Two large trees of *Araucaria Bidwillii* which had been growing below the Gallery Walk were involved in the slide and destroyed. The configuration of the garden at this point is completely changed; retaining walls are being built to support the bank but it is unlikely that the Gallery Walk can be reinstated.

The rainfall of the 29th and 30th October, when 11 inches fell in 24 hours, caused damage mainly by the complete choking of the whole drainage system of the Gardens and the consequent scour from the rushing water down the various banks.

Many of the newly planted Summer flowering annuals which form so conspicuous a feature on the lower terrace of the Old Garden were spoiled by the heavy rains of July and August and the continuous wet weather during the Autumn destroyed a large number of rose bushes. Replacements were therefore heavy. Winter annuals also suffered greatly from the Autumn rains.

With a view to restoring in some measure the beauty of the Gardens the following trees and shrubs, many of which have not previously been known or are rarely seen in the Colony, were planted in suitable positions:—*Cassia nodosa*, *Lespedeza viatorum*, *Cratonia siliqua*, *Eucalyptus sideroxylon*, *Acacia pennata*, *Clerodendron myrmeophilum* and *Ficus altissima*. Seeds of the last mentioned were presented to this Department by Captain Hodgins of the S.S. "Hoi Hong" in 1906; a specimen of this tree was first discovered at Cape D'Aguilar in 1904 by Mr. S. T. Dunn, then Superintendent of the Department.

The kerb stones along the border at the top of the New Garden were raised and put in order and the herbaceous plants rearranged and replanted; similar stones near the *Amaryllis* bed under the big *Baniam* in the Old Garden were treated in the same way.

*Amaryllis* plants in beds were heavily dressed with manure in February before they came to flower. Cannas were removed from the beds, split and after the ground had been well manured, replanted.



An old clump of *Jasminum undulatum* on a bank below the Rose Bed, New Garden, was rooted out and the area covered with turf and planted with a few pink Azaleas (*Rhododendron squamatum*).

Large numbers of cuttings of various trees, shrubs and creepers and layers of Roses, *Bougainvillea spectabilis* and *Bauhinia Blakeana* were propagated in the early Spring. A large collection of ferns and foliage plants was used for the replacement of failures in rockeries in both gardens in the Spring.

In the Plant Houses in the Old Garden all ferns and foliage plants in pots were repotted as usual. The whole stock of Mauritius palms (*Chrysalidocarpus lutescens*) in the Loan Plant Compound and elsewhere in both Gardens was divided up and repotted.

In the Pot Nursery many flowering or ornamental trees including *Artocarpus integrifolia*, were raised for 1924 planting.

The total number of plants sold during the year was 3,028, the great majority being Maiden Hair Ferns.

Three persons were arrested and convicted for disorderly conduct in the Gardens.

*Government House Grounds*:—The greatest loss in these grounds due to the typhoon was a fine specimen tree of *Erythrina indica* which separated the main building from the servants' quarters and usually had a magnificent show of flowers in the early summer. Other trees and shrubs were more or less damaged.

On October 29th-30th an earth bank below the lower walk was washed away by the heavy rainfall, causing the destruction of a large Banian tree and a *Canarium album*.

To the west of the area affected about 100 young trees of *Pinus Massoniana* were planted with a view to forming a small fir plantation and two young trees of "Jak" (*Artocarpus integrifolia*), five of *Araucaria Cunninghamii* and ten of *Araucaria excelsa* (the Norfolk Island Pine) were planted on the north banks, the latter being presented to the Colony by the Botanic Gardens, Sydney.

The creeper fence lining the north side of the grounds was reconstructed and covered with white flowering *Jasminum undulatum*, and a large collection of *Chrysalidocarpus lutescens* and red Azaleas was planted near the southeast entrance gate for screening purposes.

The areas outside the stables, grown with Blue Grass last year, were broken up and turfed and three large Queensland palms (*Archontophoenix Alexandrae*) were transplanted from the Albany Nurseries. Similar palms of smaller size were put in beds on both sides of the motor exit.



“Grass caterpillars” (*Thialleta signifera*, Walk.) which often do damage to lawns in a dry autumn did not make their appearance this year. Lawns were frequently treated with a solution of “Cha Chai” for detection of earthworms.

The interior of Government House was decorated with palms, flowering pot plants and flower baskets on June 2nd on the occasion of the celebration of the birthday of His Majesty the King. Similar decorations were carried out on the occasion of dances held on February 20th, and March 1st.

*Mountain Lodge Grounds*:—The principal loss in these grounds by the typhoon was the full grown *Ficus repens* which was well established and entirely covered the large retaining wall. The upper part of its growth has now been pruned back. Many native trees in the valley and in the small plantation below the west side of the building were also badly damaged.

A row of Chinese palms (*Livistona chinensis*) and pine seedlings was planted on the east side of the tennis court with a view to forming a screen.

During March the plants of *Rhododendron squamatum* and *Rhododendron indicum* on the grassy banks and various levels made a fine show with their flowers and towards the end of that month the purple Azaleas (*Rhododendron phoeniceum*) produced flowers in great profusion. Hydrangeas were also most attractive on various parts of the grounds during the blooming season. The herbaceous plants *Torenia concolor* have now spread extensively and again flowered extremely well.

*Blake Garden*:—The filling in of the valley with debris was completed and the area has now been remodelled as a level ground. This has much improved the garden generally and provides better accommodation for visitors.

In the typhoon of August 18th, three large trees of *Celtis sinensis*, which provided good shade on the southern terrace, were lost.

Long grass on the various banks was regularly cut and the garden kept in good order generally.

*West End Park*:—The Park was maintained in good order throughout the year, long grass being cut as required. Very little damage was done to the small Camphor tree plantation in this park by the typhoons.

*King's Park, Kowloon*:—All trees in the park received regular attention during the year in the matter of retying and restaking when necessary, and long grass was cut and seedling Lantana and Mimosa were removed from time to time. During the typhoons of July and August very little damage was done to the plantation and to the flowering trees generally.



Two persons were arrested and convicted for committing forestry offences in the park.

*Civil Hospital Grounds* :—During the typhoons several large Banian trees were blown down in these grounds and killed ; other trees and shrubs which suffered less were raised and pruned as required. The bamboo hedge round the Maternity Hospital which was believed to harbour mosquito larvae was removed and replaced with *Chrysalidocarpus lutescens*. Undergrowth on the banks to the south of the garden, below the Maternity Hospital, was cleared twice during the year. Blue grass and Fan palms (*Livistona chinensis*) which had been destroyed during the building of the Out Patients block were replaced on completion of the work. A row of Chinese palms was planted of the west side of the hard tennis court for screening purposes. Grass caterpillars were found once on the tennis lawns during the year ; they were at once treated with a solution of Jeyes fluid and checked. Grass plots and creepers on the walls of the Lunatic Asylum were regularly inspected and kept in good order.

*Colonial Cemetery* :—The position of the Cemetery is well protected by the hill at the back and by the Jockey Club premises in front and little damage was therefore done by the high winds during typhoons. The terrible downpour of rain of the 29th and 30th October, did, however, considerable damage. The lower portion near the entrance was completely flooded as the nullah was inadequate to carry off the immense volume of water and became choked with sand from the hillside above where building operations are being carried out ; grass and winter annuals on the lower level were entirely covered with sand and soil and a portion of the wall bordering on the road was knocked down. A large number of trees and palms on graves and those likely to damage headstones have been cut down and removed. Borders of shrubbery beds were successively planted with summer and winter annuals.

*Senior Officers' Quarters, Leighton Hill* :—The gardens and grounds were maintained in good condition throughout the year. The slopes near the approach road were planted with six *Bauhinia Blakeana* and four *Bauhinia variegata*.

*Indian School Grounds, Sukunpo* :—Considerable damage was done to the trees growing in these grounds by the typhoons. Grass lawns, flowering trees and creepers on the cut bank received regular attention during the year.

*Subordinate Officers' Quarters, Breezy Point* :—The grass area round these quarters was regularly cut and kept in good order.



*Volunteer Head Quarters* :—On the completion of the building of the new miniature rifle range, the Parade Ground was returfed where necessary. Privet plants on the north east side were clipped and the flowers removed before opening.

*St. John's Cathedral Compound* :—Rockeries were overhauled and furnished with ferns and foliage plants, blue grass was planted where necessary and the whole compound kept in a tidy condition generally throughout the year.

*Helena May Institute* :—Grass plots and flowering shrubs around the Institute were attended to as required.

*Statue Square* :—All grass plots in the gardens around the Square were machined, weeded and maintained in good order generally. Trees and shrubs received their annual pruning in February. The grass plots around the Cenotaph have been put in the charge of this Department.

*The Cricket Ground* :—The actual playing pitch was repaired after each match during the season. The whole pitch was regularly machined, weeded and top dressed with finely sifted old manure at the expense of the Hongkong Cricket Club.

*Victoria Hospital Grounds* :—The gardens and grounds were regularly maintained throughout the year; the grass on the new tennis lawn below the road was machined, weeded and rolled. The garden of "Lyeman" adjoining the Hospital was also attended to by this Department.

*Senior Officers' Quarters, Homestead Site* :—These grounds have now been placed under the care of this Department; some turfing has been done and the layout will be definitely settled in 1924.

*Government Pavilions and Villas* :—Grass was regularly machined and kept short and flowering shrubs attended to as required.

*Royal Observatory Grounds* :—Lawns and banks were regularly cut and maintained in good order. Undergrowth in the plantation below the buildings was cleared as usual. Fresh turf was laid down on one of the levels on the completion of the new Seismograph room.

*Children's Playground, Kowloon* :—Several trees, which had been planted here for shade purposes were removed to give room for the erection of a matsbed. The ground was attended to as required.

*Island House, District Officer's Quarters, Taipo* :—The lawn and banks were cut regularly and undergrowth cleared on the whole island as required. Seedling annuals were occasionally supplied for use as pot plants from the Botanic Gardens.



*School Gardens, New Territories*:—At the request of the Director of Education school gardens were opened at Taipo, Tai Wai and Un Long. They are now maintained and worked by the pupils of the schools. Seeds of vegetables were given on several occasions and the experiments appear to have been most successful.

#### HERBARIUM.

The usual routine work of the Herbarium consists in keeping the collections dry and free from insects, and in mounting and poisoning specimens as required. A large number of old specimens were remounted and poisoned and the whole collection occasionally sun-dried.

Specimens of local plants were identified when brought in by visitors or local collectors.

A hundred and thirty nine specimens were presented by Mr. E. H. Wilson, Jamaica Plain, Mass., U. S. A. and arrangements have been made to secure for the Herbarium a complete set of the extensive collection made of the flora of Hainan Island by officers of the Canton Christian College.

#### FORESTRY.

The typhoons of the year resulted in great losses among the trees of the Colony ; that of August 18th caused enormous damage to trees of all kinds on the Island, in Kowloon Peninsula and in the New Territories and many trees were blown down and killed, while still more were seriously injured. Immediately after each storm and more particularly after the great typhoon the chief duty of the foresters, with the assistance of outside labour as required, was in clearing the thoroughfares of fallen trees ; when this was completed broken branches everywhere had to be carefully looked for and trimmed off. In the plantations this work is not yet completed. In one plantation alone on the Island 2,000 pine trees were killed and over 3,000 seriously damaged.

*Formation of Pine Tree Plantations*:—Seeds of *Pinus Masoniana* were sown *in situ* in the following places, sixty three pounds of seed being used :—50,000 near the new Shek O Motor Road, 3,077 on Cheung Chau Island and 50,000 at Quarry Bay. 230 pounds of seed were also sown broad-cast on the grass banks, below the Shek O Road, the Tsun Wan Road and between Shatin and the Taipo Road. In areas burnt by fire resowing took place in the following areas, 250 pounds in Plantation 7C below the Matilda Hospital, Mount Kellet, and 25½ pounds on hills near Fanling Golf Course and Sheung Shui. In Plantations 5C and 5D at Repulse Bay 213 pounds were used for the same purpose.



*Broad-leaved Trees Planted* :—In the natural forest behind Little Hongkong Old Village, where the old trees of various kinds are being felled by contract, 3,500 young Camphor trees were planted. It is hoped in time to produce a Camphor plantation in this area. Eighty four young "Jak" trees *Artocarpus integrifolia* were planted to replace failures in a plantation near Aberdeen Reservoir. Around the proposed Golf Course at Shek O, 58 *Poinciana regia*, 2 *Albizia Lebbek*, 5 *Aleurites montana* and 59 *Aleurites triloba* were planted and along the motor road to Shek O 207 trees of various kinds were used to replace failures. Owing to the prevailing high winds replacements of failures of young trees along the various roads were exceptionally numerous.

On the slopes of the Sung Wong Toi, Kowloon, a mixed collection of flowering trees was planted consisting of 48 *Casuarina equisetifolia*, 30 *Tristania conferta*, 41 *Eucalyptus tereticornis*, 38 *Poinciana regia*, 12 *Celtis sinensis*, 26 *Bischofia javanica*, 6 *Albizia Lebbek*, 32 *Bauhinia variegata* and 78 *Cinnamomum Camphora*. In Plantation 9A at Tai Wo Po, Kowloon, 9,200 young Camphor trees were planted.

The principal trees used for roadside planting consisted of *Tristania conferta*, *Casuarina equisetifolia*, *Bauhinia Blakeana*, *Bauhinia variegata*, *Aleurites triloba*, *Erythrina indica*, *Ficus infectoria*, *Melaleuca Leucadendron*, *Crataeva religiosa*, *Paulownia Fortunei*, *Poinciana regia*, *Cassia fistula* and *Cinnamomum Camphora*, which were used in the following places, Stubbs Road 192, Conduit Road 4, Broadwood Road 32, Shek O Road 101, Repulse Bay Road 5, Pokfulam Road 8, Magazine Gap Road 17, Wong-Nei-Chong Gap Road 10, Salisbury Road (Kowloon) 30, Nam Chong Street (Shumshuipo) 90, Taipo Road (N. T.) 59, Lok Ma Chau Road (N. T.) 153, and Santin Road (N. T.) 13.

*Miscellaneous Planting* :—*Ficus* creepers were used to cover up bare earth cuttings on the following positions, Stubbs Road 268, May Road 66, Craigmin Road 80, Broadwood Road 730, Wong-Nei-Chong Gap Road 80 and Chamberlain Road 63. Six *Melaleuca Leucadendron* were planted near the Wanchai Dispensary, and in the vicinity of Tregunter Mansions, May Road, a mixed collection of flowering trees, shrubs and creepers was planted. Forty *Hibiscus* were used for the replacement of failures on Crown Land above Barker Road and twenty five *Hydrangeas* were transplanted from a small plot near Chamberlain Road affected by the construction of the motor road, to an open area adjoining Peak Road above the Upper Tram Station.

In Stanley Military Cemetery 28 *Aleurites triloba*, 2 *Crataeva religiosa*, 2 *Casuarina equisetifolia* and 10 *Allamanda Schottii* were planted to replace failures.



In various positions on Cheung Chau Island 1,000 Camphor Trees, 115 *Eucalyptus tereticornis*, 60 *Crataeva religiosa*, 50 *Erythrina indica*, 52 *Callistemon rigidus*, 95 *Casuarina equisetifolia*, 180 *Tristania conferta*, 160 *Ficus infectoria* and 80 *Ficus retusa* were planted, some of which were to replace failures.

*Trees Removed* :—In connection with the general improvement and widening of roads, the sale of building lots, excavations for reclamations and various public works, large numbers of trees, both large and small and of various kinds were felled; those which were cut down near public roads were mainly Banians. About 500 pine trees were cut down for the laying-out of an extension to the Tai Shek Kwo Cemetery, Kowloon. Trees which were removed after destruction by typhoons will be replaced as much as possible within the next few years.

*Undergrowth Clearing* :—The usual removal of undergrowth as part of the campaign against malaria was conducted throughout the year, the total area cleared amounting to over 6,500,000 square feet. In addition over 2,400,000 square feet of undergrowth were cleared for the Public Works Department for survey purposes, and in connection with the laying-out of new building sites, the formation of new roads and other public improvements.

*Care of trees in Plantations* :—*Loranthus* and creepers were removed from trees on roadsides and in plantations as far as possible whenever they are observed. Pine tree caterpillars fortunately appeared only in small numbers in one plantation near Fanling. They were immediately collected and destroyed.

*Protection from fire* :—Fire barriers made in previous years were all inspected and recleared before the beginning of the dry season; 19 $\frac{1}{4}$  miles were cleared in the New Territories, Southern District, 5 $\frac{3}{4}$  miles at Fanling, and 18 $\frac{1}{2}$  miles on Hongkong Island.

There were 79 fires during the year as compared with 51 last year. Of these 34 were in the first quarter, 38 in the second, 1 in the third and 6 in the fourth. The most serious fire was one at Mount Kellet on the 1st day of February which lasted nearly 24 hours and destroyed over 4,000 pine trees and about the same number of other trees. In a plantation on Diamond Hill, Kowloon, over 1,000 young pine trees perished in another fire.

On the Tsing Ming Festival day, April 6th, only 11 small fires broke out in plantations where graves exist. These were speedily extinguished. On October 18th, the Chung Yeung Festival, no fires occurred. On both occasions the assistance of 10 District Watchmen was kindly lent to this Department through the Secretary for Chinese Affairs.

The thanks of the Department are due to Police officers at outlying stations for the prompt manner in which fires were reported, and for the despatching of coolies to deal with the fires under their supervision pending the arrival of forest officers.



*Forest Guards Service* :—The total number of persons arrested and charged for committing forestry offences during the year was 406 as compared with 335 last year and 287 in 1921; of these 306 were convicted, 35 cautioned, 28 discharged, 36 had their bail estreated and 1 was recommended for banishment. Particulars of these cases are given in Tables II and III.

There was a marked increase this year in the stealing of wood from Plantations &c. This is partly accounted for by the high price and inadequate supplies of firewood arriving in the Colony from the usual sources and partly by the increased temptation to the poorer inhabitants of seeing trees damaged by the typhoons lying in the streets and elsewhere. Immediately after the big typhoon of August 18th the services of these unofficial gleaners were somewhat appreciated but when they turned their attention to sound standing timber strong action had to be taken. Notices were printed in Chinese and displayed in prominent places warning the trespassers that exemplary measures would be taken against any offenders caught. The situation righted itself gradually by the end of the year.

About sixty piculs of wood, unlawfully cut down by persons unknown, were seized at Lung Kwo Tan, and at Shek O over 130 piculs of Camphor wood were similarly seized.

Nearly \$300 was obtained as compensation from various building contractors and the Hongkong Electric Company for damage done by their workmen to plantations. Enquiries were held on three occasions under Ordinance No. 6 of 1917 in connection with the illicit cutting of trees near villages and fines were imposed by His Excellency the Governor in Council, \$30 on Po Kong; \$25 on Chuk Yuen, and \$300 on Tai Hang Villages.

For a few weeks before Chinese New Year an effort was again made to protect *Euclanthus quinqueflorus* which is one of the most beautiful of the shrub flora of Hongkong and the New Territories. But for the vigilance of this Department this beautiful shrub would soon be entirely lost to the Colony.

*Forestry Service Paths* :—These paths were, as far as possible, cleared and repaired during the year.

*Forestry Licences, New Territories* :—The total amount of fees collected during the year amounted to \$4,744.11 as compared with \$4,831.87 in 1922.

#### NURSERIES, AGRICULTURE, &c.

*The Albany Nurseries* :—New terraces were made in the upper nursery and planted with a mixed collection of flowering shrubs and Cannas for the purpose of maintaining a supply of cut flowers for Government House. Towards the end of the year a small area in the Lower Nursery was dug up and bedded with flowering plants and bulbs suitable for a similar purpose.



*Sukunpo Vegetable Garden* :—Three large *Eucalyptus tereticornis* and one *Melaleuca Leucadendron* were blown down and killed by the typhoon of August 18th. All the young trees of *Cassia fistula*, *Bauhinia variegata* and *Paulownia Fortunei* were taken up and replanted as roadside trees in various parts of the island. All *Cannas* and *Hedychiums* in the garden were taken up, divided and replanted in the spring. They were for a short time completely buried by sand and soil carried down from Mt. Caroline by the heavy rain of October 29th-30th.

*Beacon Hill Nurseries* :—Part of the old 9B Nursery had to be given up this year in connection with the Kowloon Tong Housing Scheme and many young trees which had been raised there were transplanted to the west of the main stream traversing this area. In January two new nurseries, now named 9A Upper and Lower, were formed for the raising of young trees for afforestation during 1924, the following being raised during the year :—10,000 *Cinnamomum Camphora*, 300 *Poinciana regia*, and 340 *Bauhinia variegata*. The growing of *Aleurites Fordia* and *Aleurites montana* for the purpose of investigations into the possibilities of the commercial production of wood oil has not been satisfactory as most of the seedlings of both varieties suffered heavily from the typhoons. A further trial of seeds of *Aleurites montana* has been made at Fanling about 45 pounds of seeds having been raised before the end of the year. A small quantity of seeds of *Sciadopytis verticillata* was procured from the Yokohama Nursery and sown at 9A Nursery and at Fanling, but unfortunately without success. Cuttings of *Cunninghamia sinensis* were for the first time propagated with fair results. *Glyptostrobus heterophylla* seeds were also sown for trial. Kapok, seeds of which were sown in 1922, made good progress, but it is too early yet to report on the experiment.

*Little Hongkong Nursery* :—A small nursery was opened at Little Hongkong Old Village last year for the propagation of Camphor trees for the reafforestation of the adjoining forest. A second crop of young trees was raised during this year and is ready to go into position in the spring of 1924.

*Fanling Experimental Garden* :—This garden has during the year been in process of reformation, new areas being laid out and the required channels and paths made. Fruit trees and Pineapples were lifted, rearranged and replanted in better positions. Small trees of the wild Mangosteen (*Garcinia oblongifolia*) were again tried but without success. The "Smooth Cayenne" pineapples procured from Honolulu are progressing favourably, but so far no fruit has been produced. A large portion of the garden formerly occupied by winter and summer vegetables, was broken up, levelled and sown with seeds of *Poinciana regia*, *Aleurites montana* and *Perilla ocymoides*. It is hoped in due course to furnish a report to the Imperial Institute, London, on the possibilities of wood oil production from *Aleurites* and *Perilla*. Tobacco was again experimented with.



*Inspection of Nursery Stock*:—During the months of July to November the usual examination of *Narcissus Tazetta* intended for export to the United States of America and Honolulu was carried out by the Department. With the exception of a few consignments which were detained for reconditioning all were found to be free from fungoid disease or noxious insects. A total of 1,070,040 bulbs, packed in 8,540 cases, was inspected and certified, the largest number examined since the inauguration of this service in 1919.

#### SEEDS &C.

*Seed Collecting*:—The following were collected during the year for sowing purposes :—560 pounds Pine ; 27 pounds *Callistemon* ; 10 pounds *Tristania* ; 16 pounds *Bauhinia variegata* ; 8 pounds *Melaleuca* ; 5 pounds *Ficus retusa* ; 13 pounds *Ficus infectoria* ; 12 pounds Casuarina ; and 40 pounds Camphor. It is unfortunate that, owing to the destruction of the crop by typhoons, no seeds were obtainable of *Eucalyptus tereticornis* or of *Erythrina indica*.

*Exchange of Seeds, &c.*:—The Department is indebted to the following donors of seeds, plants &c.:—Directors de la Estacion, Experimental Agronomica, Cuba ; Royal Botanic Gardens, Ceylon ; Botanic Gardens, Sydney ; Superintendent, La Mortola, Ventimiglia, Italy ; Canton Christian College, Canton ; Mow Fong Garden ; and Messrs. H. Humphreys, H. Campbell (Perth, Western Australia) and Wilson Popenoe (Agricultural Explorer, U. S. Department of Agriculture).

The following were the principal recipients:—Director, Royal Botanic Gardens, Kew ; Directors de la Estacion, Experimental Agronomica, Cuba ; Horticultural Section, El Giza (Mudiriya), Egypt ; Superintendent, Horticulture Operations, Raisina, Delhi, India ; Secretary, Zoological Society of London ; Pere M. Lefebvre, Missionnaire ; United States Department of Agriculture, San Francisco ; His Honour Mr. Justice Gompertz ; Mow Fong Garden ; Mrs. Rowe Thornett, F.R.H. (Australia) ; Mrs. King (Amoy) ; Tai Wai School Garden ; Un Long School ; Taipo School Garden ; Pok Oi Hospital, New Territories ; and Messrs. H. Nehrling, (U. S. A.), H. T. Brooks, H. Humphreys, J. Williams (England), W. J. Kerr, F. H. Dillon, James E. Beland (England), Blake Mould, A. Morris, H. Campbell (Perth, W. A.), D. J. Fullaway (Honolulu), E. H. Walker (Canton), A. Birch (Egypt), L. S. L. Fraser (Victoria, Australia), J. D. Clifford, F.C.H. (Federated Shan States) and B. Bunting (Selongor, F.M.S.).

#### REVENUE AND EXPENDITURE.

A statement of the Revenue collected by the Department and a comparison of Revenue and Expenditure are given in Tables IV and V.



STAFF.

The Superintendent, Mr. H. Green, went on leave on the 30th May, and Mr. W. J. Carrie was appointed to administer the Department in addition to his other duties. Mr. A. J. Thornton, Assistant Superintendent resigned on 31st March and the post has since remained vacant. The Supervisor, Mr. B. E. G. Spinks, resigned on 31st January and Mr. G. B. Twemlow was appointed to succeed him on February 1st.

The Head Gardener, Mr. Luk Tsun Fai, has had sole responsibility since the departure of Mr. Green for the technical side of garden work and the Supervisor and Head Forester for forestry operations. The general work of the Department has, I trust, been kept to its usual high level.

W. J. CARRIE,  
*Superintendent.*

27th February, 1924.



Table I.  
RAINFALL, 1923.  
*Botanic Gardens.*

DATE.	Jan.	Feb.	Mar.	April.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.
1,	...	...	...	...	1.33	2.10	1.30	...	.01	...	...	...
2,	...	...	...	...	.69	.70	1.12	...	...	...	...	...
3,	...	...	...	...	.05	.76	.18	...	...	...	...	...
4,	...	...	...	...	.04	.17	...	.48	...	...	...	...
5,	...	...	...	.42	...	...	...	6.48	...	...	...	...
6,	...	...	.02	...	.14	...	.14	...	...	...	.41	.01
7,	...	...	.08	...	...	.10	.07	...	.60	...	...	.11
8,	...	...	...	...	...	.73	.03	...	.41	...	...	.11
9,	...	...	...	.01	...	.05	.02	...	.02	...	...	.04
10,	...	...	.01	...	...	.02	...	.10	...	...	...	...
11,	...	...	...	2.68	...	...	...	1.75	...	...	...	...
12,	...	...	.08	1.42	...	2.35	...	.81	...	.23	...	.02
13,	...	...	.05	.16	...	3.85	...	1.36	.32	.15	...	.05
14,	...	.06	.03	...	...	1.93	...	1.14	.03	1.05	...	...
15,	...	.01	...	.03	...	.03	...	.67	.02	.11	...	...
16,	...	...	.34	.06	...	...	...	.35	.03	...	...	...



Table I,—Continued.

DATE.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.
17, .....	...	.05	.20	1.56	.25	.02	...	1.44	.44	...	...	...
18, .....	...	.08	...	.01	...	.21	.03	3.75	...	...	...	...
19, .....	...	.01	.03	1.00	...	.02	.12	.74	...	...	...	...
20, .....	...	...	...	.01	...	.25	1.41	...	...	...	...	...
21, .....	.21	.26	...	...	...	.05	1.70	.95	4.24	...	...	...
22, .....	...	.06	...	...	...	.16	3.53	.05	.01	...	...	.16
23, .....	...	...	...	...	...	.50	.02	...	...	...	.08	...
24, .....	...	...	...	.52	...	2.34	...	...	...	...	.06	...
25, .....	...	...	...	.01	.10	.98	...	.09	.71	...	...	.04
26, .....	...	.08	...	.01	...	1.00	1.20	2.77	.07	.05	...	...
27, .....	...	...	...	...	...	.07	5.76	7.08	...	.15	...	...
28, .....	...	...	...	...	...	...	1.33	2.26	...	.09	...	...
29, .....	...	...	...	...	.27	...	1.67	2.31	...	11.00	...	...
30, .....	...	...	...	.01	.23	.12	.80	...	...	.01	...	.09
31, .....	...	...	...	...	1.25	...	...	.60	...	...	...	...
Total, .....	.21	.61	.84	7.94	4.36	18.51	20.43	35.18	6.91	12.84	.55	.63

Rainfall for First Quarter 1.66 inches on 18 days; for Second Quarter 30.81 inches on 50 days; for Third Quarter 62.52 inches on 51 days; and for Fourth Quarter 14.02 inches on 21 days. Total for the year 109.01 inches. Average for the last ten years at the Botanic Gardens—95.99 inches.

Total rainfall registered at the Royal Observatory, Hongkong, for the year—106.74 inches.

Table II.

FOREST GUARDS' SERVICE : OFFENCES.

Village or District.	Block.	Compartment.	REPORT OF														
			Pine tree stealing.	Pine tree branch stealing.	Pine tree needle stealing.	Pine cone stealing.	Brush-wood stealing.	Grass cutting.	Wild flower stealing.	Bamboo stealing.	Turt stealing.	Fern stealing.	Cattle grazing in plantation.	Setting fire to plantation.	Removing earth.	Offering Bribe to Forest Guard.	Travelling on plantation.
Victoria, .....	1	A.B.G.	1	6	...	...	8	...	...	...	3	...	...	...	...	...	...
Wongneichong, .....	2	A.B.C.D.E.F.G.	16	7	...	...	18	2	...	...	...	...	...	...	...	...	...
Shaukiwan, .....	3	A.B.C.D.E.F.G.	43	14	...	...	70	1	...	...	...	1	...	...	...	...	...
Tytan, .....	4	B.	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Stanley, .....	5	A.G.	3	...	...	...	4	...	...	...	...	...	...	...	...	...	...
Aberdeen, .....	6	A.B.C.	13	1	...	...	21	...	...	...	...	...	...	...	...	...	...
Pokfulam, .....	7	A.B.C.D.E.G.	5	7	...	...	20	...	...	...	...	...	...	...	...	...	...
Kowloon, .....	8	C.	1	1	1	...	...	...	...	...	...	1	...	...	...	...	3
Harbour Belt, .....	9	A.B.C.D.	25	33	35	...	11	1	1	...	...	2	...	4	...	...	...
Cheungshawan, .....	10	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Kanghau, .....	11	...	2	...	...	...	3	5	...	...	...	...	1	...	...	...	...
New Territories, .....	12	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total for 1923,			117	69	36	...	156	9	6	...	...	1	3	1	4	...	4
Total for 1922,...			64	87	35	1	100	14	4	24	2	...	3	...	...	1	...



Table III.

POLICE COURT RESULTS.

<i>Cases.</i>	<i>1923.</i>	<i>1922.</i>
50 cents to \$1 fine, ... ..	44	38
\$1.50 to \$2 „ ... ..	65	23
\$2.50 to \$3 „ ... ..	34	39
\$4 to \$5 „ ... ..	33	70
\$6 to \$10 „ ... ..	16	9
\$11 to \$25 „ ... ..	8	2
1 to 4 days' imprisonment, ... ..	17	17
5 to 7 „ „ ... ..	55	33
8 to 14 „ „ ... ..	27	37
3 weeks' „ ... ..	2	7
4 „ „ ... ..	—	4
1 month's „ ... ..	4	1
6 weeks' „ ... ..	1	—
Discharges, ... ..	28	7
Cautions, ... ..	35	27
Forfeiture of Bail, ... ..	36	10
Recommended, for Banishment, ... ..	1	—
Personal Bond, ... ..	—	11
Total, ... ..		406
		335

**Table IV.**

**REVENUE.**

REVENUE.						1923.	1922.
						\$ c.	\$ c.
Timber Sales,	...	...	...	...	...	8,533.10	5,238.52
Sale of Plants,	...	...	...	...	...	850.05	766.03
Loan of Plants,	...	...	...	...	...	696.42	748.58
Forestry Licences,	...	...	...	...	...	4,744.11	4,831.87
Inspection of Nursery Stock,	...	...	...	...	...	1,005.00	740.00
Interest on Current Accounts,	...	...	...	...	...	2.04	4.48
Miscellaneous Receipts,	...	...	...	...	...	—	7.37
Forfeiture,	...	...	...	...	...	—	100.00
Fine Fund,	...	...	...	...	...	18.04	27.47
Total,						15,848.76	12,464.32

**Table V.**

Comparative Statement of Revenue and Expenditure  
for the years 1914-1923.

Year.	Total Expenditure.	Total Revenue.	% of Revenue to Expenditure.
	\$ c.	\$ c.	%
1914	49,095.97	6,934.21	14.12
1915	49,404.56	6,871.67	13.91
1916	47,325.89	7,034.67	14.86
1917	51,253.82	7,294.49	14.23
1918	51,967.08	6,282.45	12.09
1919	51,457.65	8,307.77	16.16
1920	55,975.49	8,547.76	15.27
1921	61,428.11	10,657.86	17.35
1922	71,223.47	12,464.32	17.50
1923	77,157.40	15,848.76	20.54







